

HIV/AIDS

Definition : Infection with human immunodeficiency virus (HIV) results in a variety of manifestations becoming progressively more severe over time and usually ending in death. AIDS, as defined by CDC, includes HIV-infected persons with severe immunodeficiency (CD4 lymphocyte count <200 cells/ μ l or <14% of total lymphocytes) and/or one of 26 opportunistic infections (e.g., *Pneumocystis carinii* pneumonia), neoplasms (e.g., Kaposi's sarcoma) or other indicator conditions (e.g., wasting syndrome).¹
ICD-9 codes 042, 043.1, 043.3.

Summary

In 1994, 829 AIDS cases were diagnosed among Washington State residents, for an annual incidence rate of 15.5 per 100,000 population. HIV was the 10th leading cause of death in Washington. Among men age 25-44 it was the second leading cause of death, accounting for 22% of deaths. Persons with AIDS were hospitalized for over 10,000 days in 1994 at a cost of at least \$15.2 million.

Time Trends

The first AIDS case in Washington was reported in 1982. Through 1993, AIDS incidence increased steadily, although the rate of increase has slowed over time. Based on the year of AIDS diagnosis, cases increased an average of 60% each year between 1984 and 1988; between 1990 and 1993, cases increased an average of 10% each year.² This roughly parallels US trends.

In 1994, 829 AIDS cases were diagnosed in Washington and reported as of November 1995—a 16% decrease from 1993. This is the first year in which the number of AIDS cases declined. However, caution must be used when interpreting these data. Case reporting for 1994 is incomplete due to reporting delays, and the AIDS case

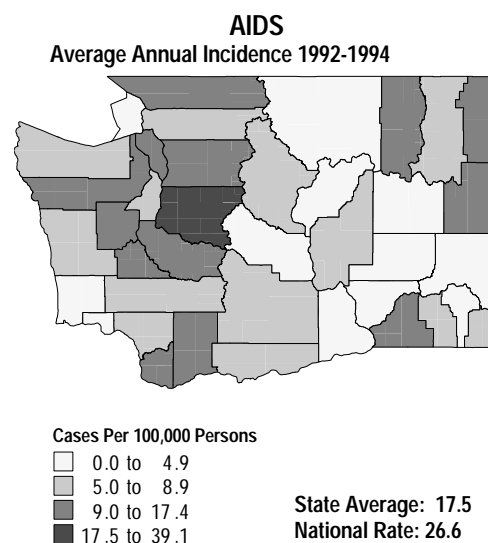
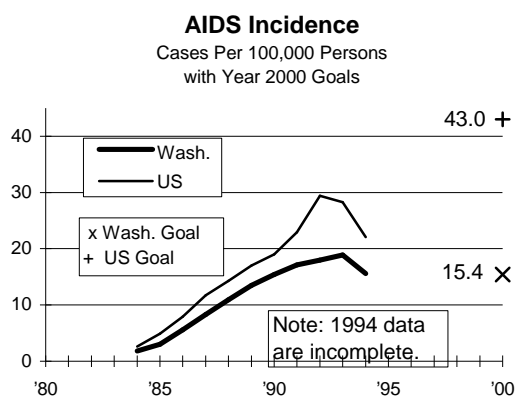
immunodeficiency in the absence of symptomatic illness. Furthermore, the introduction in 1993 of laboratory-initiated reporting of severe immunodeficiency enhanced the completeness of AIDS case reporting relative to previous years. Accurate interpretation of recent trends will be possible only after reporting has stabilized.

Year 2000 Goal

Washington's goal for the year 2000 is an annual count of 900 or fewer new AIDS cases (annual incidence not to exceed 15.4 per 100,000). Estimated AIDS trends and population projections suggest that this goal is achievable, but it would require a continuation of prevention activities.

Geographic Variation

Over the course of the epidemic, at least one AIDS case has been reported from each county except Garfield and Wahkiakum. AIDS tends to be concentrated in urban areas. When rural counties



definition was expanded in 1993 to include severe

show high rates, they are usually based on small numbers and are apt to fluctuate widely from year to year.

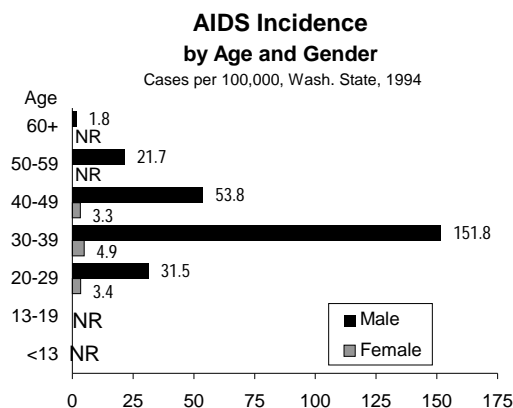
From 1992-1994, King County had by far the highest AIDS average annual incidence rate in the state (39.1 per 100,000). Other populous counties with relatively high rates were Clark, Snohomish, and Pierce. Four counties had no reported cases during those three years: Douglas, Garfield, Wahkiakum, and Whitman.

In recent years the rate of increase in AIDS cases has been greater outside King County than inside. Between 1990 and 1993, cases outside King County increased, on average, by 14% each year. In King County, they increased by 7% each year. As a result, the proportion of Washington AIDS cases diagnosed outside King County has grown from 21% in 1985 to 39% in 1994.²

Age and Gender

AIDS is primarily a disease of young adults, with a median age at diagnosis of 36 years. In 1994, AIDS was diagnosed in 774 men (median age: 36 years) and 55 women (median age: 35.5 years). Three children were diagnosed with AIDS; all were infected perinatally.

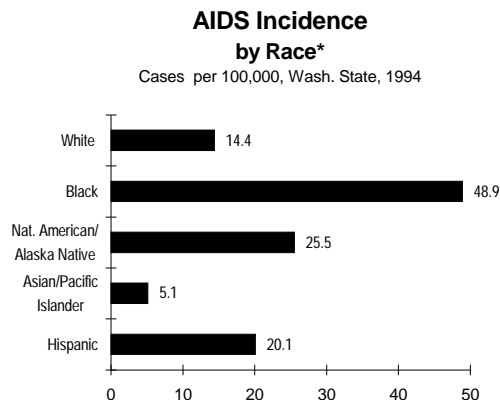
Ninety-four percent of all AIDS cases have been diagnosed among men. Cases among women, however, have increased each year since 1988 and are currently increasing more rapidly than among men. In 1985, women accounted for 2% of all AIDS cases; in 1994, they accounted for 7% of all cases.



Race and Ethnicity

Although the majority of AIDS cases in Washington State are among whites, racial minorities have been disproportionately affected

by the epidemic. This disparity by race is most noticeable in women. Among men diagnosed with AIDS in 1994, 81% were white, 8% were black, and 7% were Hispanic. Among women, 51% were white, 38% were black and 9% were Hispanic.



***Note:** For other indicators in this report, Hispanic origin is considered an ethnic category and not a racial group. For HIV/AIDS, because CDC defines it this way, Hispanic is treated as a distinct racial group. See the appendix for a more detailed discussion of this issue.

Other Measures of Impact & Burden

HIV Seroprevalence. HIV infection is not reportable by law in Washington and the number of infected individuals is not known. However, estimates based on CDC projections of HIV prevalence in specific populations have suggested that between 10,000 and 20,000 Washington State residents were living with HIV infection in 1992.³

Studies conducted at sexually transmitted disease clinics and drug treatment clinics in King County and Pierce County from 1988-1994 have shown a cumulative HIV seroprevalence of 24% for men who have had sex with men (MSM).⁴ Of MSM who did not use injection drugs, 23% were HIV seropositive; of those who used injection drugs, 29% were seropositive. HIV seroprevalence among MSM who did not use injection drugs declined from 30-40% in 1989 to less than 20% in 1994; among those who used drugs, there was no consistent change. In these same studies, the cumulative HIV seroprevalence among female and heterosexual male injection drug users was below 4%.⁴ These rates have not changed in any consistent direction over time.

Quality of Life. Before and after the onset of AIDS, HIV infection may cause significant

morbidity from a variety of illnesses. Physical debility may lead to socioeconomic deprivation through unemployment and loss of medical insurance. In persons with known HIV infection, the anticipation of chronic illness and untimely death and the fear of social stigmatization may lead to a sense of personal isolation, depression, anxiety and other psychological problems.

Mortality. In 1994, HIV infection accounted for 608 deaths among Washington residents resulting in 15,441 years of potential life lost to 65 years of age (YPLL). HIV was the 9th leading cause of death overall. Among men 25-44 years of age, HIV was the second leading cause of death, accounting for 22% of deaths.

Hospitalization. Data from the statewide Comprehensive Hospital Abstract Reporting System (CHARS) show that 26% of persons living with AIDS accessed inpatient care in 1994. These patients accounted for 10,381 hospital days at a total cost of over \$15.2 million. Compared to 1988-89, the proportion of discharges with private medical insurance in 1993-94 declined from 53% to 45%. The percent of discharges for which Medicare or Medicaid was the primary payer rose from 35% in 1988-89 to 48% in 1993-94.

Risk and Protective Factors

Two behaviors, unprotected sexual intercourse with an HIV-infected partner and sharing HIV-contaminated drug injection equipment, are responsible for the vast majority of new HIV infections in Washington. Individuals who are sexually abstinent and who do not use injection drugs are at virtually no risk of HIV infection. An HIV-infected pregnant woman can transmit the infection to her fetus/infant. Currently, transmission of HIV through blood transfusions and improper or accidental breakdown of infection control practices rarely occurs.

Sexual intercourse. While HIV can be transmitted in a single act of sexual intercourse, it is not transmitted with every act of sexual intercourse. The risk of HIV transmission during unprotected sexual intercourse with a seropositive person has been estimated to be from 1:10 to 1:1,000. Risk is increased for anal and vaginal intercourse, by the presence of other sexually transmitted diseases, for receptive or passive partners, and for persons with multiple partners. Correct and consistent use of latex condoms

virtually eliminates the risk of sexual transmission of HIV.

Sharing injection equipment. HIV can be transmitted through the use of HIV-contaminated needles and syringes, a risk most commonly associated with illicit injection drug use. It has been estimated that 0.5% to 1.5% of the adult Washington population has used illicit injection drugs at some point during their lifetimes. Proper cleaning and disinfection of equipment with bleach solutions and the consistent use of new (not shared) equipment can reduce the risk of disease transmission.

Maternal transmission. HIV can be transmitted to the fetus during pregnancy or to the infant during or shortly after birth. The rate of maternal transmission in pregnant women not receiving zidovudine (AZT) has been estimated at 25-30%. Early identification of the mother's infection and treatment with AZT can reduce the number of HIV-infected infants by two-thirds. HIV may also be transmitted from an HIV-infected mother to her infant by breast-feeding.

High Risk Populations

Eighty-four percent of the AIDS cases in Washington have been among men who have had sex with men (MSM). This has been the predominant mode of HIV exposure in all regions and among all races/ethnicities. Although the majority of cases continue to be diagnosed among MSM, the number of cases among injection drug users (IDU) and heterosexual contacts of persons with HIV is increasing more rapidly than among MSM. As a result, from 1985 through 1994, the proportion of new AIDS cases that occurred among MSM each year decreased from 92% to 77%. During the same time, cases among IDU increased from 2% to 11%, and cases among heterosexual contacts of persons with HIV increased from 0% to 6% of all Washington state AIDS cases. This shift in mode of HIV exposure has been evident in all regions of the state.²

Anyone who engages in behaviors associated with HIV transmission is at risk for infection. Groups of people considered at greater risk because of higher prevalence of HIV or frequency of risk behaviors include MSM, IDU, heterosexual partners of MSM and IDU, blacks, Hispanics, and youth.

Intervention Points, Strategies and Effectiveness

In the absence of a preventive vaccine or a cure, prevention of HIV/AIDS relies on adoption of safer behaviors. Impediments to this include denial of risk, cultural unacceptability of condom use or sexual abstinence, ambivalence about sexuality, social stigmas surrounding HIV/AIDS, lack of access to information about safer sex, and lack of access to sterile injection equipment. HIV morbidity is driven by complex social conditions including poverty, substance abuse, and discrimination based on sexual orientation. Prevention and control of HIV requires multifaceted programs that address these issues.

Primary AIDS prevention relies on a comprehensive strategy of education, enhanced access to protective devices and medical supplies (including AZT for HIV-infected pregnant women), and a variety of public health interventions to reduce risk behaviors. Individual interventions can change behaviors, but alone are insufficient to address risk reduction for populations with high prevalences of HIV.

Research has demonstrated certain characteristics common to successful HIV prevention programs. Behavior change is facilitated by training in assertiveness, refusal skills, communication skills with sexual partners regarding safe sex practices, and behavioral self-management. The most effective interventions are those which are appropriate for the individuals' developmental stages.⁵

Intensive and sustained interventions are more likely to lead to sustained behavior change. While HIV counseling and testing has a place in risk reduction, it is not itself sufficient for promoting and reinforcing behavioral change.

Community interventions can lead to significant reductions in individual risk behaviors.⁶ Modification of community norms on sexual safety appears to decrease high-risk behavior.

Primary prevention also depends upon the widespread availability of protective devices and equipment, such as sterile syringes, bleach kits, and latex condoms. Because infection with other sexually transmitted diseases can facilitate transmission of HIV, effective control of these diseases is a prevention strategy for HIV.

Secondary prevention of AIDS is directed at slowing the progression of disease among healthy

HIV-infected individuals. Studies have shown that antivirals and prophylactic treatments to prevent opportunistic infections can slow the progress from HIV infection to AIDS.⁷ All HIV-infected individuals benefit from close medical monitoring. Access to medical care and timely diagnostic and therapeutic interventions are important for all HIV-infected individuals.

Data Sources

State AIDS data: Washington Department of Health, Office of HIV/AIDS Epidemiology and Evaluation.

National AIDS data: Public Health Service, Centers for Disease Control and Prevention.

State death data: Washington Department of Health, Center for Health Statistics.

State hospitalization data: Washington Department of Health, Office of Hospital and Patient Data Systems.

For More Information

Washington State Department of Health, Office of Infectious Disease and Reproductive Health, Assessment Unit, (360) 664-4512.

Washington State Department of Health, Office of Infectious Disease and Reproductive Health, HIV/AIDS Prevention and Education Unit, (360) 586-5624.

Washington State Department of Health, Office of Infectious Disease and Reproductive Health, Client Services and Intervention Unit, (360) 753-3493.

Endnotes:

¹ CDC: 1993 Revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. MMWR 1992;41(RR-17).

² Washington State Department of Health: Washington State HIV/AIDS Epidemiologic Profile-1995, prepared by the Office of HIV/AIDS Epidemiology and Evaluation, Division of Community and Family Health.

³ Report of HIV/AIDS Forecast Committee, Washington State Department of Health, Seattle-King County Department of Public Health and Tacoma-Pierce County Department of Public Health, 1993.

⁴ Hansen G, Fields J, Petrusek L, Ryland LM. HIV seroprevalence surveys in Washington State, 1988-1995. HIV/AIDS Quarterly Epidemiology Report, 3rd Quarter 1995, 8-12.

⁵ Kirby D, Barth R, Leland N, et al. Reducing the risk: A new curriculum to prevent sexual risk-taking. Family Planning Perspectives; 1991; 23:253-63.

⁶ Kelly JA, St. Lawrence JS, Stevenson LY, et al. Community AIDS/HIV risk reduction: The effects of endorsements by popular people in three cities. American Journal of Public Health; 1992; 82:1483-89.

⁷ El-Sadr W, Oleske JM, Agins BD et. al. *Evaluation and Management of Early HIV Infection. Clinical Practical Guideline No. 7.* AHCPR Publication No. 94-0572. Rockville, MD: Agency for Health Care Policy and Research, Public Health Service, US Dept. of Health and Human Services, January 1994.

